



he Radiant Low Voltage Lighting System is the Specifier's choice for architectural coves requiring continuous dramatic lighting. Designed to complement a wide range of design possibilities and add excitement to both interior and exterior, the Radiant System was designed specifically for long run, long life commercial and residential lighting applications.

The Radiant Low Voltage Lighting System takes a new and innovative approach to interior and exterior lighting applications by solving many problems associated with low voltage lighting. Radiant fixtures mold to conform to unusual shapes and irregular coves without field drawings and can be field cut and modified to conform to actual job requirements. The strip to strip connector assemblies provide electrical connections and polarization with one screw and integral sockets provide continuous illumination over long lengths. A secondary 25A circuit is built into each strip to ensure steady, even light distribution over long runs while doubling the current carrying capacity of any miniature light strip. Ultra High Temperature Thermoplastic provides a heat resistant surface material as well as an unusual amount of flexibility. Xenon and incandescent, low voltage lamps are designed specifically for long life commercial applications. These lamps are available in clear to provide sharp, crisp lighting or frosted for a soft wash of light. Indexed Lamp Clips lock in position to maintain lamp spacing along curves and corners. Finally, a wide range of precision engineered accessories have been developed to allow complete and creative presentations.

The Radiant Low Voltage Lighting System represents the marriage of superior technology, precision engineering and innovative design which combine to create highly efficient, highly effective specialized lighting equipment. The designs and engineering accomplishments featured here are the result of an ongoing collaborative effort between David Morgan of DMA and Bruce Belfer of the Belfer Group. Multiple patents are pending.



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THE RADIANT ADVANTAGE

The Radiant Low Voltage Lighting System offers many distinct installation and maintenance advantages:

- Integrated Vertical Connector Assembly makes short work of all connections...strip to strip or strip to feed, all four connectors are automatically polarized and joined with one single screw
- Two 25 Amp Circuits double the current carrying capacity of any miniature light strip

1200 watts @ 24 volts 600 watts @ 12 volts

- Strip to Strip Connector Assembly with integral sockets for continuous illumination
- Integrated Vertical Connector Assembly eliminates wirenuts, screw terminals, tab connections and junctions boxes... all the installation headaches normally associated with miniature low voltage systems
- Indexed Lamp Clip Assembly retains on center spacing in any curved or straight configuration
- Multiple Patents Pending

Two lamp styles:

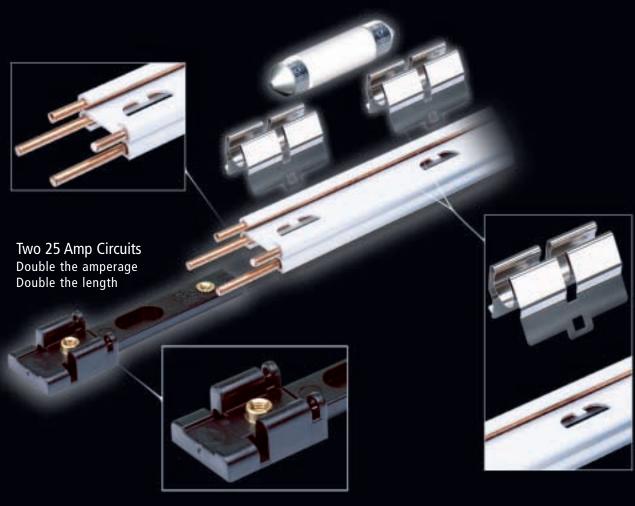


Festoon



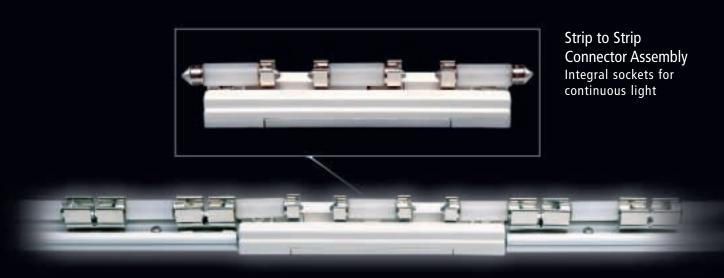
Rigid Loop





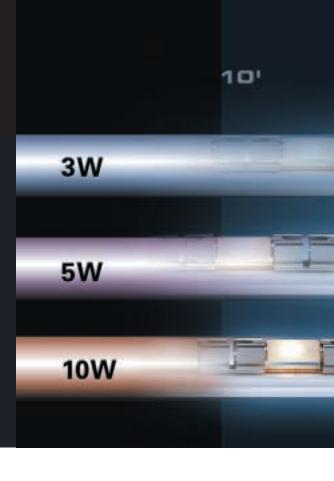
Integrated Vertical Connector Assembly
Accepts all Radiant connectors

Indexed Lamp Clip Assembly Lamps stay in place



THE RADIANT TWO CIRCUIT SYSTEM

- NEC 411 and UL 1598 specify that the maximum allowable circuit is 25 Amps
- In order to overcome restrictions this 25 Amp limit, we have included a 2nd 25 Amp circuit in the fixture itself
- No complex calculations are needed
- The second 25 Amp circuit is automatically accessed with any of our RAD 200 series connector accessories



RADIANT CHECKSUM™ SYSTEM

THE RADIANT CHECKSUM SYSTEM is our unique, simple and accurate method of ensuring that every Radiant Linear Low Voltage System is properly circuited and meets applicable U.L. and N.E.C. codes, which allow a maximum of 25 amps per Low Voltage circuit.

TRADITIONAL AMPERAGE CALCULATIONS

Traditionally extensive calculations were necessary to determine the size and number of transformers, circuits, feed locations and overcurrent protection devices needed for a linear low voltage system.

FOR EXAMPLE ▶

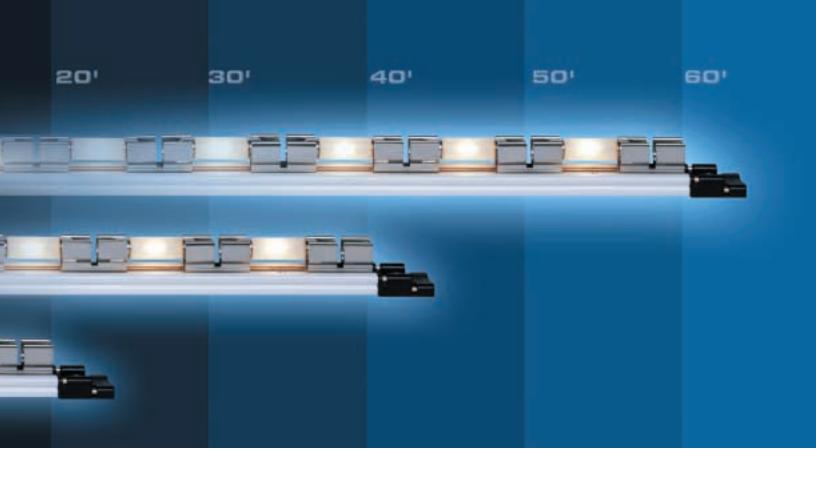
317 linear feet of linear low voltage strip with 5 watt lamps, 2.125 inches on center, 24 volts (all Radiant Linear Low Voltage strips are 2.125 inches (54 mm) on center)

HERE IS THE MATH

317 feet x 12 inches/foot = 3804 inches / 2.125 inches on center = 1790 lamps x 5 watts/lamp = 8950 watts / 24 volts = 373 amps x 1.06 (6% Load Margin) = 396 amps / 25 amps/circuit =	3804 inches 1790 lamps 8950 watts 373 amps 396 amps 15.84
	16 circuits 25 amps each note: always round up

THE RADIANT CHECKSUM SYSTEM eliminates all the traditional calculations associated with low voltage products. The ✓ SUMTM is precalculated based upon the voltage and amperage characteristics of 12 and 24 volt systems, including a Load Margin.

	nt Low Voltage inear Feet		t Low Voltage ear Meters
<u>Volt</u>	✓ SUM	<u>Volt</u>	✓ SUM
12V	50	12V	15
24V	100	24V	30



-THE ENTIRE CALCULATION IS DONE IN TWO STEPS: -

total footage x watts/lamp = load factor / CHECKSUM =

load factor number of 25 amp circuits required

note: always round up

THE RADIANT CHECKSUM SYSTEM calculates the number of circuits quickly and accurately.

Using the same example as before

317 linear feet of linear low voltage strip with 5 watt lamps, 2.125 inches on center, 24 volts (all Radiant Linear Low Voltage strips are 2.125 inches (54 mm) on center)

For a 24 Volt System in linear feet, the ✓ SUM™ = 100

317 feet x 5 watts/lamp = 1585 /100 (✔ SUM) =

1585 load factor 15.85

> 16 circuits 25 amps each

note: always round up

THE RADIANT CHECKSUM SYSTEM WORKS EVERY TIME!

Using this simple system consistently ensures sufficient circuit counts for any project of any size, and automatically includes a reasonable Load Margin. All Power Supplies and Transformers are listed by voltage and number of 25 Amp circuits, thus making the specification and quotation processes faster, easier and considerably more user friendly.

FESTOON APPLICATIONS

Radiant Festoon Low Voltage Light Strips are best suited to applications where the light strips may be visible as part of the decorative nature of the installation.







ACCESSORY DETAIL

Live End Feed

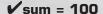
- Smallest 50 Amp connector available
- Feeds upper (lit) and lower (spare) circuits
- Compatible with romex and metal conduit
- Accepts up to 10 gauge (30 Amp) conductors
- Eliminates wire nuts, terminal blocks and junction hardware
- Connects to strip and to all four conductors with a single screw
- Silver plated contacts for superior conductivity and near-zero voltage drop through the connection
- Automatically maintains correct polarity
- UL and CUL listed, Class 1 System, suitable for installation in any locale (patents pending)

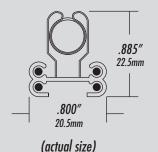


RAD 204

RAD LV 225 F 24 VOLTS, 10 WATTS FESTOON LOW VOLTAGE LIGHT STRIP

Feet per 25 amps11.0





FIXTURE	SOCKET	LENGTH	LAMP	VOLTAGE	VVATTAGE
O RAD LV 225	O F (festoon)	 O2 (2' length) O4 (4' length) O5 (5' length) O6 (6' length) O8 (8' length) 10 (10' length) F (linear per foot) 	XC (xenon clear) XF (xenon frost) IC (incandescent clear)	24 (24 volts)	O 10 (10 watts)
Lengths are nomin	al. Refer to page 4	1 for actual lengths		(II)	

PRODUCT FEATURES

To order RAD LV 225 fixture without lamps, please specify RAD LV 225 F LENGTH only

Constructed of Proprietary Ultra High Temperature Thermoplastic (U.L. Recognized)

2.125" (54mm) on center lamp spacing

10 Watt Xenon and Incandescent Festoon Lamps available lamp details are found on page 34

ALR, MR8 and MR11 Swivel Lamp Holders are easily inserted swivel lamp holders are found on page 18

Electronic or Magnetic power supplies are available power supply details are found on page 36

2 - 25 Amp Circuits, specifically designed to conform to U.L. 1598 and N.E.C. 411

Indexed Sockets lock in position to maintain lamp spacing

c(UL)US LISTED

Connector Accessories are available accessory details are found on page 32

Field Curvable to 12" radius (305mm)

Standard lengths are 2', 4', 5', 6', 8' and 10' Lengths can be field cut

Integral Connector Assembly

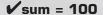
Multiple Patents Pending

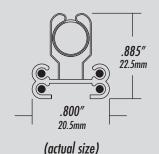
Festoon 24 Volt, 10 Watt



RAD LV 225 F 24 VOLTS, 5 WATTS FESTOON LOW VOLTAGE LIGHT STRIP

.amps per foot	5.5
Natts per foot2	7.0
Amps per foot	1.2
Feet per 25 amps	2.0





FIXTURE	SOCKET	LENGTH	LAMP	VOLTAGE	WATTAGE	
O RAD LV 225	O F (festoon)	 O2 (2' length) O4 (4' length) O5 (5' length) O6 (6' length) O8 (8' length) 10 (10' length) F (linear per foot) 	XC (xenon clear)XF (xenon frost)IC (incandescent clear)IF (incandescent frost)	24 (24 volts)	O 5 (5 watts)	
Lengths are nomin	nal. Refer to page 4	1 for actual lengths		(II)		

PRODUCT FEATURES

Constructed of Proprietary Ultra High Temperature Thermoplastic (U.L. Recognized)

To order RAD LV 225 fixture without lamps, please specify RAD LV 225 F LENGTH only

2.125" (54mm) on center lamp spacing

5 Watt Xenon and Incandescent Festoon Lamps available lamp details are found on page 34

ALR, MR8 and MR11 Swivel Lamp Holders are easily inserted swivel lamp holders are found on page 18

Electronic or Magnetic power supplies are available power supply details are found on page 36

2 - 25 Amp Circuits, specifically designed to conform to U.L. 1598 and N.E.C. 411

Indexed Sockets lock in position to maintain lamp spacing

c(UL)US LISTED

Connector Accessories are available accessory details are found on page 32

Field Curvable to 12" radius (305mm)

Standard lengths are 2', 4', 5', 6', 8' and 10' Lengths can be field cut

Integral Connector Assembly

Multiple Patents Pending



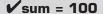
ACCESSORY DETAIL

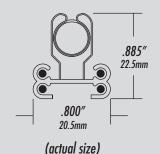
Crossover Circuit Connector

- Designed to access the second 25 Amp circuit while automatically terminating the first
- Intended for use at the end of the first 25 Amp length to provide power for the second 25 Amp length
- Integral festoon sockets allow for seamless illumination through connection
- Eliminates wire nuts, terminal blocks and junction hardware
- Connects to strip and to all four conductors with a single screw
- Silver plated contacts for superior conductivity and near-zero voltage drop through the connection
- · Automatically maintains correct polarity
- UL and CUL listed, Class 1 System, suitable for installation in any locale (patents pending)



RAD LV 225 F 24 VOLTS, 3 WATTS FESTOON LOW VOLTAGE LIGHT STRIP





FIXTURE	SOCKET	LENGTH	LAMP	VOLTAGE	WATTAGE	
O RAD LV 225	O F (festoon)	 O2 (2' length) O4 (4' length) O5 (5' length) O6 (6' length) O8 (8' length) 10 (10' length) F (linear per foot) 	XC (xenon clear)XF (xenon frost)IC (incandescent clear)	24 (24 volts)	3 (3 watts)	
Lengths are nomir	nal. Refer to page 4	1 for actual lengths				

PRODUCT FEATURES

To order RAD LV 225 fixture without lamps, please specify RAD LV 225 F LENGTH only

Constructed of Proprietary Ultra High Temperature Thermoplastic (U.L. Recognized)

2.125" (54mm) on center lamp spacing

3 Watt Xenon and Incandescent Festoon Lamps available lamp details are found on page 34

ALR, MR8 and MR11 Swivel Lamp Holders are easily inserted swivel lamp holders are found on page 18

Electronic or Magnetic power supplies are available power supply details are found on page 36

2 - 25 Amp Circuits, specifically designed to conform to U.L. 1598 and N.E.C. 411

Indexed Sockets lock in position to maintain lamp spacing

Connector Accessories are available accessory details are found on page 32

Field Curvable to 12" radius (305mm)

Standard lengths are 2', 4', 5', 6', 8' and 10' Lengths can be field cut

Integral Connector Assembly

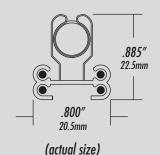
Multiple Patents Pending



RAD LV 225 F 12 VOLTS, 10 WATTS FESTOON LOW VOLTAGE LIGHT STRIP

Lamps per foot											5.5
Watts per foot										.5	5.0
Amps per foot											4.6
Feet per 25 amps											5.0





FIXTURE	SOCKET	LENGTH	LAMP	VOLTAGE	VVATTAGE
O RAD LV 225	O F (festoon)	 O2 (2' length) O4 (4' length) O5 (5' length) O6 (6' length) O8 (8' length) 10 (10' length) F (linear per foot) 	XC (xenon clear) XF (xenon frost) C incandescent clear)	12 (12 volts)	O 10 (10 watts)
Lengths are nomi	nal. Refer to page 4	1 for actual lengths		(II)	

PRODUCT FEATURES

To order RAD LV 225 fixture without lamps, please specify RAD LV 225 F LENGTH only

Constructed of Proprietary Ultra High Temperature Thermoplastic (U.L. Recognized)

2.125" (54mm) on center lamp spacing

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c(UL)US LISTED

Connector Accessories are available accessory details are found on page 32

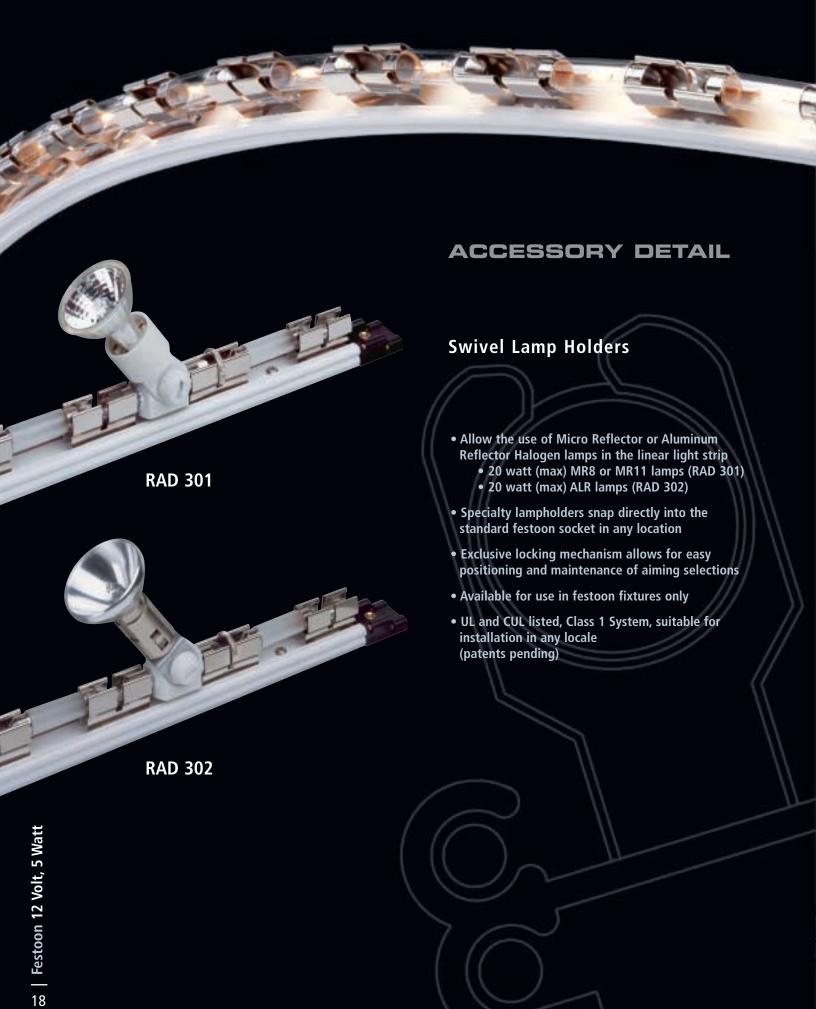
Field Curvable to 12" radius (305mm)

Standard lengths are 2', 4', 5', 6', 8' and 10' Lengths can be field cut

Integral Connector Assembly

Multiple Patents Pending

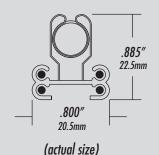
| Festoon 12 Volt, 10 Watt



RAD LV 225 F 12 VOLTS, 5 WATTS FESTOON LOW VOLTAGE LIGHT STRIP

Lamps per foot	.5.5
Watts per foot	27.5
Amps per foot	.2.3
Feet per 25 amps	11.0





FIXTURE	SOCKET	LENGTH	LAMP	VOLTAGE	WATTAGE	
O RAD LV 225	O F (festoon)	 O2 (2' length) O4 (4' length) O5 (5' length) O6 (6' length) O8 (8' length) 10 (10' length) F (linear per foot) 	XC (xenon clear)XF (xenon frost)IC (incandescent clear)IF (incandescent frost)	O 12 (12 volts)	O 5 (5 watts)	
Lengths are nomir	nal. Refer to page 4	1 for actual lengths		(

PRODUCT FEATURES

To order RAD LV 225 fixture without lamps, please specify RAD LV 225 F LENGTH only

Constructed of Proprietary Ultra High Temperature Thermoplastic (U.L. Recognized)

2.125" (54mm) on center lamp spacing

5 Watt Xenon and Incandescent Festoon Lamps available lamp details are found on page 34

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2 - 25 Amp Circuits, specifically designed to conform to U.L. 1598 and N.E.C. 411

Indexed Sockets lock in position to maintain lamp spacing

c(UL)US LISTED

Connector Accessories are available accessory details are found on page 32

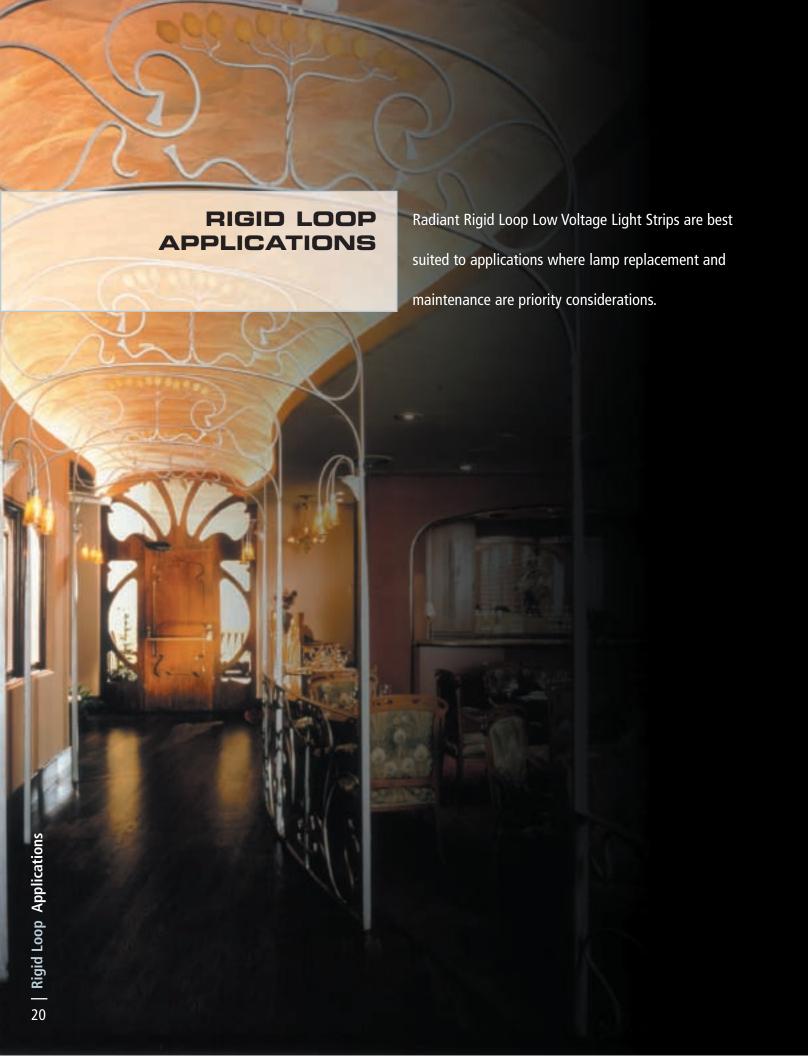
Field Curvable to 12" radius (305mm)

Standard lengths are 2', 4', 5', 6', 8' and 10' Lengths can be field cut

Integral Connector Assembly

Multiple Patents Pending

| Festoon 12 Volt, 5 Watt









ACCESSORY DETAIL

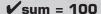
Live End Feed

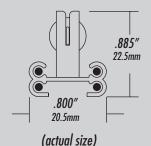
- Smallest 50 Amp connector available
- Feeds upper (lit) and lower (spare) circuits
- Compatible with romex and metal conduit
- Accepts up to 10 gauge (30 Amp) conductors
- Eliminates wire nuts, terminal blocks and junction hardware
- Connects to strip and to all four conductors with a single screw
- Silver plated contacts for superior conductivity and near-zero voltage drop through the connection
- Automatically maintains correct polarity
- UL and CUL listed, Class 1 System, suitable for installation in any locale (patents pending)



RAD LV 225 L 24 VOLTS, 10 WATTS RIGID LOOP LOW VOLTAGE LIGHT STRIP

Watts per foot55.0 Feet per 25 amps11.0





FIXTURE	SOCKET	LENGTH	LAMP	VOLTAGE	WATTAGE
O RAD LV 225	O L (rigid loop)	 O2 (2' length) O4 (4' length) O5 (5' length) O6 (6' length) O8 (8' length) 10 (10' length) F (linear per foot) 	O XC (xenon clear) O XF (xenon frost)	24 (24 volts)	O 10 (10 watts)
		1 for actual lengths amps, please specify RAD) LV 225 L LENGTH only	CUL US LISTED	a Belfer/DMA design

PRODUCT FEATURES

Constructed of Proprietary Ultra High Temperature Thermoplastic (U.L. Recognized)

2.125" (54mm) on center lamp spacing

10 Watt Xenon Rigid Loop Lamps are available lamp details are found on page 34

Electronic or Magnetic power supplies are available power supply details are found on page 36

2 - 25 Amp Circuits, specifically designed to conform to U.L. 1598 and N.E.C. 411

Indexed Sockets lock in position to maintain lamp spacing

Connector Accessories are available accessory details are found on page 32

Field Curvable to 12" radius (305mm)

Standard lengths are 2', 4', 5', 6', 8' and 10' Lengths can be field cut

Integral Connector Assembly

Multiple Patents Pending



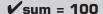
ACCESSORY DETAIL

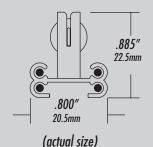
Thru Circuit Connector

- Intended for use in the middle of a 25 Amp
- Designed to carry both 25 Amp circuits straight through a strip to strip connection
- Integral rigid loop sockets allow for seamless illumination through connection
- Eliminates wire nuts, terminal blocks and junction hardware
- Connects to strip and to all four conductors with a single screw
- Silver plated contacts for superior conductivity and near-zero voltage drop through the connection
- Automatically maintains correct polarity
- UL and CUL listed, Class 1 System, suitable for installation in any locale (patents pending)



RAD LV 225 L 24 VOLTS, 5 WATTS RIGID LOOP LOW VOLTAGE LIGHT STRIP





FIXTURE	SOCKET	LENGTH	LAMP	VOLTAGE	WATTAGE
O RAD LV 225	O L (rigid loop)	 O2 (2' length) O4 (4' length) O5 (5' length) O6 (6' length) O8 (8' length) 10 (10' length) F (linear per foot) 	XC (xenon clear) XF (xenon frost)	24 (24 volts)	O 5 (5 watts)
		1 for actual lengths amps, please specify RAD	LV 225 L LENGTH only	CUL US LISTED	a Belfer/DMA design

PRODUCT FEATURES

Constructed of Proprietary Ultra High Temperature Thermoplastic (U.L. Recognized)

2.125" (54mm) on center lamp spacing

5 Watt Xenon Rigid Loop Lamps are available lamp details are found on page 34

Electronic or Magnetic power supplies are available power supply details are found on page 36

2 - 25 Amp Circuits, specifically designed to conform to U.L. 1598 and N.E.C. 411

Indexed Sockets lock in position to maintain lamp spacing

Connector Accessories are available accessory details are found on page 32

Field Curvable to 12" radius (305mm)

Standard lengths are 2', 4', 5', 6', 8' and 10' Lengths can be field cut

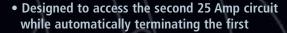
Integral Connector Assembly

Multiple Patents Pending

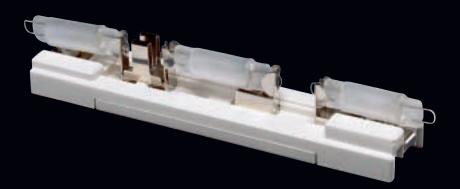
공 | Rigid Loop 12 Volt, 10 Watt

ACCESSORY DETAIL

Crossover Circuit Connector



- Intended for use at the end of the first 25 Amp length to provide power for the second 25 Amp length
- Integral rigid loop sockets allow for seamless illumination through connection
- Eliminates wire nuts, terminal blocks and junction hardware
- Connects to strip and to all four conductors with a single screw
- Silver plated contacts for superior conductivity and near-zero voltage drop through the connection
- Automatically maintains correct polarity
- UL and CUL listed, Class 1 System, suitable for installation in any locale (patents pending)

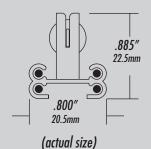


RAD 203L

RAD LV 225 F 12 VOLTS, 10 WATTS RIGID LOOP LOW VOLTAGE LIGHT STRIP

Feet per 25 amps5.0





FIXTURE	SOCKET	LENGTH	LAMP	VOLTAGE	WATTAGE
O RAD LV 225	O L (rigid loop)	 O2 (2' length) O4 (4' length) O5 (5' length) O6 (6' length) O8 (8' length) 10 (10' length) F (linear per foot) 	XC (xenon clear) XF (xenon frost)	12 (12 volts)	10 (10 watts)
		1 for actual lengths amps, please specify RAD	LV 225 L LENGTH only	CUL US LISTED	a Belfer/DMA design

PRODUCT FEATURES

Constructed of Proprietary Ultra High Temperature Thermoplastic (U.L. Recognized)

2.125" (54mm) on center lamp spacing

10 Watt Xenon Rigid Loop Lamps are available lamp details are found on page 34

Electronic or Magnetic power supplies are available power supply details are found on page 36

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Indexed Sockets lock in position to maintain lamp spacing

Connector Accessories are available accessory details are found on page 32

Field Curvable to 12" radius (305mm)

Standard lengths are 2', 4', 5', 6', 8' and 10' Lengths can be field cut

Integral Connector Assembly

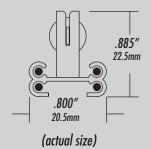
Multiple Patents Pending



RAD LV 225 F 12 VOLTS, 5 WATTS RIGID LOOP LOW VOLTAGE LIGHT STRIP

Feet per 25 amps11.0





FIXTURE	SOCKET	LENGTH	LAMP	VOLTAGE	WATTAGE
O RAD LV 225	O L (rigid loop)	 O2 (2' length) O4 (4' length) O5 (5' length) O6 (6' length) O8 (8' length) 10 (10' length) F (linear per foot) 	O XC (xenon clear) O XF (xenon frost)	O 12 (12 volts)	O 5 (5 watts)
		1 for actual lengths amps, please specify RAD	LV 225 L LENGTH only	CUL US LISTED	a Belfer/DMA design

PRODUCT FEATURES

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Connector Accessories are available accessory details are found on page 32

Field Curvable to 12" radius (305mm)

Standard lengths are 2', 4', 5', 6', 8' and 10' Lengths can be field cut

Integral Connector Assembly

Multiple Patents Pending





RAD 202 Thru Circuit Flexible Connector

- Can be field modified to crossover circuit
- Designed to carry both 25 Amp circuits straight through a strip to strip connection
- Eliminates wire nuts, terminal blocks and junction hardware
- Connects to strip and to all four conductors with a single screw
- Silver plated contacts for superior conductivity and near-zero voltage drop through the connection
- Automatically maintains correct polarity
- Can be field modified to crossover circuit
- UL and CUL listed, Class 1 System, suitable for installation in any locale (patents pending)

RAD 210 Universal Thru Circuit Connector Feed (Not Shown)

- Single circuit connection when no second 25 Amp circuit required
- Can be mounted in any location along the length of the strip
- Eliminates wire nuts, terminal blocks and junction hardware
- Silver plated contacts for superior conductivity and near-zero voltage drop through the connection
- Automatically maintains correct polarity
- UL and CUL listed, Class 1 System, suitable for installation in any locale (patents pending)





RAD 401 Dead End Termination

RAD 402 Mounting Clip

RAD 403 Right Angle Bracket

- For termination of field cut pieces
- No tools required (4 count)

- Exclusive slot allows for extra easy installation
- Secures strip to surface
- Snaps tightly to strip
- Can be positioned anywhere
- Two mounting options
- Exclusive slot allows for extra easy installation (4 count)

- Useful for curves and compound curves
- Secures strip to surface
- Snaps tightly to strip
- Can be positioned anywhere
- Two mounting options (4 count)



RAD 401



RAD 402



RAD 403

Strip to Strip Connectors

Radiant Strip to Strip Connectors are precision engineered to allow for a variety of creative installations.

Intended for use in the middle of a 25 Amp length, each connector:

- eliminates wire nuts, terminal blocks and junction hardware
- connects all four conductors with a single screw per strip
- utilizes silver plated contacts for superior conductivity and near-zero voltage drop through the connection
- automatically maintains correct polarity

Radiant Strip to Strip connectors are UL and	CUL listed, Class 1 S	system, suitable for installation in any locale. (patents pending)
	O RAD 201F	Thru Circuit Connector (Festoon) Designed to carry both 25 Amp circuits straight through a strip to strip connection. Integral festoon sockets allow for seamless illumination through connection. (see page 12 for details)
	O RAD 201L	Thru Circuit Connector (Rigid Loop) Designed to carry both 25 Amp circuits straight through a strip to strip connection. Integral rigid loop sockets allow for seamless illumination through connection. (see page 24 for details)
	O RAD 202	Thru Circuit Flexible Connector Designed to carry both 25 Amp circuits straight through a strip to strip connection. (see page 30 for details)
	O RAD 203F	Crossover Circuit Connector (Festoon) Designed to access the second 25 Amp circuit while automatically terminating the first. Integral festoon sockets allow for seamless illumination through connection. (see page 14 for details)
	O RAD 203L	Crossover Circuit Connector (Rigid Loop) Designed to access the second 25 Amp circuit while automatically terminating the first. Integral rigid loop sockets allow for seamless illumination through connection. (see page 26 for details)
	O RAD 204	Live End Feed Designed to feed upper (lit) and lower (spare) circuits. Compatible with romex or metal conduit. (see page 10 and 22 for details)
	O RAD 209	Thru Circuit Adjustable Angle Corner Connection Designed to carry both 25 Amp circuits straight through a strip to strip connection while allowing an adjustable 0° to 180° angle connection between strips.

O RAD 210

(see page 16 and 28 for details)

second 25 Amp circuit is required

(see page 30 for details)

Universal Thru Circuit Connector Feed (not shown) Designed to allow for a single circuit connection when no

Aimable Lamp Holders

Radiant Aimable Lamp Holders allow the use of MR, ALR or Halogen lamps in the linear light strip.

- specialty lampholders snap directly into the standard festoon socket in any location
- exclusive locking mechanism allows for easy positioning and maintenance of aiming selections

Radiant Aimable Lamp Holders are UL and CUL listed, Class 1 System, suitable for installation in any locale. (patents pending)



RAD 301

MR8/MR11 Locking Swivel Lamp Holder

20 watt (max) MR8 or MR11 lamps Festoon fixture only (see page 18 for details)

RAD 302

ALR Locking Swivel Lamp Holder

20 watt (max) Festoon fixture only (see page 18 for details)

O RAD 303

Halogen Insert Lamp Holder (not shown)

10 watt or 20 watt (max) Exclusive tempered glass surround Festoon fixture only

Miscellaneous

Down to the smallest details, Radiant Low Voltage Light Strips are designed with the application in mind. (patents pending)



RAD 401

Dead End Termination (4 count)

No tools are required for termination of field cut pieces (see page 31 for details)



RAD 402

Mounting Clip (4 count)

Secures strip to surface Exclusive slot allows for extra easy installation (see page 31 for details)



RAD 403

Right Angle Bracket (4 count)

Useful for curves and compound curves (see page 31 for details)

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LAMP SPECIFICATIONS

RAD LV225 FESTOON FIXTURE



FESTOON TECHNICAL INFORMATION

FIXTURE	DESCRIPTION	# LAMPS/ F00T	WATTS	WATTS/ FOOT	VOLTS	AMPS/ FOOT	FEET/ 25 AMPS
FT 1210 X	10W 12V Xenon Clear Festoon	5.5	10	55.0	12	4.60	5
FT 1210 X F	10W 12V Xenon Frost Festoon	5.5	10	55.0	12	4.60	5
FT 1210	10W 12V Incandescent Clear Festoon	5.5	10	55.0	12	4.60	5
FT 1205 X	5W 12V Xenon Clear Festoon	5.5	5	27.5	12	2.30	11
FT 1205 X F	5W 12V Xenon Frost Festoon	5.5	5	27.5	12	2.30	11
FT 1205	5W 12V Incandescent Clear Festoon	5.5	5	27.5	12	2.30	11
FT 1205 F	5W 12V Incandescent Frost Festoon	5.5	5	27.5	12	2.30	11
FT 2410 X	10W 24V Xenon Clear Festoon	5.5	10	55.0	24	2.30	11
FT 2410 X F	10W 24V Xenon Frost Festoon	5.5	10	55.0	24	2.30	11
FT 2410	10W 24V Incandescent Clear Festoon	5.5	10	55.0	24	2.30	11
FT 2405 X	5W 24V Xenon Clear Festoon	5.5	5	27.5	24	1.20	22
FT 2405 X F	5W 24V Xenon Frost Festoon	5.5	5	27.5	24	1.20	22
FT 2405	5W 24V Incandescent Clear Festoon	5.5	5	27.5	24	1.20	22
FT 2405 F	5W 24V Incandescent Frost Festoon	5.5	5	27.5	24	1.20	22
FT 2403 X	3W 24V Xenon Clear Festoon	5.5	3	16.5	24	1.00	36
FT 2403 X F	3W 24V Xenon Frost Festoon	5.5	3	16.5	24	1.00	36
FT 2403	3W 24V Incandescent Clear Festoon	5.5	3	16.5	24	1.00	36
FT 2403 R	3W 24V Incandescent Red	5.5	3	16.5	24	1.00	36
FT 2403 G	3W 24V Incandescent Green	5.5	3	16.5	24	1.00	36
FT 2403 B	3W 24V Incandescent Blue	5.5	3	16.5	24	1.00	36
FT 2403 Y	3W 24V Incandescent Yellow	5.5	3	16.5	24	1.00	36

RAD LV225 RIGID LOOP FIXTURE



RIGID LOOP TECHNICAL INFORMATION

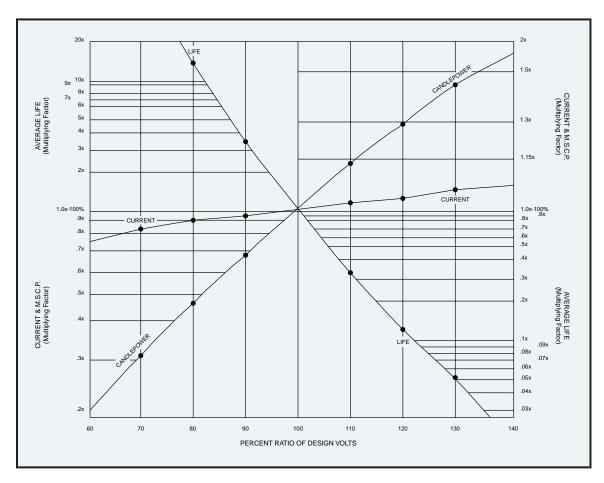
FIXTURE	DESCRIPTION	# LAMPS/ F00T	WATTS	WATTS/ FOOT	VOLTS	AMPS/ FOOT	FEET/ 25 AMPS
RLB 1210	10W 12V Xenon Clear Rigid Loop	5.5	10	55.0	12	4.58	5
RLB 1210 F	10W 12V Xenon Frost Rigid Loop	5.5	10	55.0	12	4.58	5
RLB 1205	5W 12V Xenon Clear Rigid Loop	5.5	5	27.5	12	2.29	11
RLB 1205 F	5W 12V Xenon Frost Rigid Loop)	5.5	5	27.5	12	2.29	11
RLB 2410	10W 24V Xenon Clear Rigid Loop	5.5	10	55.0	24	2.29	11
RLB 2410 F	10W 24V Xenon Frost Rigid Loop	5.5	10	55.0	24	2.29	11
RLB 2405	5W 24V Xenon Clear Rigid Loop	5.5	5	27.5	24	1.15	22
RLB 2405 F	5W 24V Xenon Frost Rigid Loop	5.5	5	27.5	24	1.15	22

Before a new lamp design is proposed for an application, a thorough search should be made of available lamp types to determine whether an existing lamp can be rerated to meet user needs. Reviewing lamp specifications in this section can help determine whether an existing lamp will meet specific needs or, if not, which rerated lamps will satisfy user requirements. The three basic formulas that apply to rerating incandescent lamps are:



V = APPLICATION VOLTAGE

V₁ = DESIGN VOLTAGE



This graph illustrates the manner in which current, candlepower and life performance vary with percent changes in applied voltage. These values are typical for miniature and subminiature lamps.

LIFE

Average life hours are based on rated voltage, 60 cycle alternating current in a room temperature ambient environment, under static conditions. Dimmed halogen cycle lamps require periodic operation at design voltage to avoid blackening and reduced life.

CONVERTING BRIGHTNESS VALUES

Mean Spherical Candle Power (M.S.C.P.) is convertible to lumens by a factor of 4 $\pi \! .$

JUST A WORD ABOUT POWER SUPPLIES...

Belfer Group works closely with premium electronic and magnetic transformer manufacturers to select and test quality transformers and components in order to assure the most reliable fixture operation. To assist the Specifier in choosing the proper Power Supply for their application, we offer these descriptions of the different types of Power Supplies and the protection and safety devices utilized with our low voltage systems.

MAGNETIC POWER SUPPLIES:

Specifically engineered to handle the rigors of larger applications, Belfer Group Magnetic Power Supplies incorporate a range of technical features designed to provide consistent power for years of quiet, trouble-free performance. All Belfer Group Magnetic Power Supplies are engineered around ferrite cores and copper coils 25% larger than standard commercial transformers of identical power rating, a feature critical in minimizing voltage drop. These oversized components allow our Power Supplies to run cooler and quieter than cheaper alternatives, an important consideration where noise and/or dimming is of concern. All Belfer Group Magnetic Power Supplies are full range dimmable, and each is equipped with heavy duty, UL/NEC compliant, resettable overcurrent/short circuit protection devices to protect each 25 Amp secondary (output) circuit.

ELECTRONIC POWER SUPPLIES:

Perfect for smaller installations, our standard Electronic Power Supplies carry a Class A sound rating and offer a range of professional grade features. All Belfer Group Electronic Power Supplies are equipped with integral short circuit, overcurrent and thermal protection. The 60 and 75 watt units have switched resets, while the 150 and 300 watt units are auto-resetting. All Belfer Group Electronic Power Supplies are full range dimmable and feature Soft-Start circuitry for extended lamp life and added technical aesthetic.

QTRAN™ POWER SUPPLIES:

Many Specifiers rely upon the quality and performance of QTran Power Supplies for their low voltage lighting projects. Belfer Group is pleased to offer an extensive range of QTran equipment, specifically designed and selected for compatibility with our low voltage lighting fixtures. Please consult our sales department for additional information regarding the features and options available with these units.

REMOTE LOAD CENTERS:

Radiant Linear Low Voltage lighting fixtures are UL and CUL listed, Class 1 systems. Our exclusive Remote Load Centers provide the required overcurrent protection necessary to maintain these safety listings and overall system integrity in installations where properly sized transformers are supplied by others.

DIMMING:

All Belfer Group Power Supplies are suitable for use in applications which require dimming. Electronic Power Supplies are 100% compatible with trailing edge (reverse phase control, FET type) electronic dimming equipment. Magnetic Power Supplies are 100% compatible with dimming equipment designed to operate inductive loads. Lutron™ dimming is recommended, as are similar systems from other specification grade dimming manufacturers.

POWER SUPPLY WARRANTIES:

At Belfer Group, we use only the best grade of power components from top rated manufacturers. All Belfer Group Power Supplies are protected from defects in materials and workmanship by our factory warranty for a period of one year. The primary component manufacturers afford additional warranty protection, pro rata, for periods of up to five years. These warranties are passed through to our customers. QTran Power Supplies are warranted by QTran for up to five years. There are varying terms and conditions that may apply to your specific installation. Copies of the Belfer Group warranty, and those of QTran and other primary component manufacturers, are available upon request.

POWER SUPPLIES

Power Supply	WATTAGE	Voltage	CIRCUITS/AMP
Magnetic Power Supplies			
RPM300-12	300	12	1/25A
O RPM600-12	600	12	2/25A
RPM600-24	600	24	1/25A
O RPM1200-24	1200	24	2/25A
Electronic Power Supplies			
RPE75-12	75	12	1/6A
O RPE150-12	150	12	1/12.5A
○ RPE300-12	300	12	1/25A
O RPE75-24	75	24	1/3A
O RPE150-24	150	24	1/6A
○ RPE300-24	300	24	1/12.5A
QTran [™] Magnetic Power Supplies (with circuit breaker and choke)			
O QX150-1/15-CK-S	150	12/24	1
QX300-1/25-CK-S	300	12/24	1
○ QX450-1/25-CK-L	450	12/24	1
○ QX450-2/25-CK-L	450	12/24	2
QX600-1/25-CK-L	600	12/24	1
○ QX600-2/25-CK-L	600	12/24	2
○ QX750-1 CT-CK-L	750	12/24	1
○ QX750-2 CT-CK-L	750	12/24	2
○ QZ1200-2 CT-CK-L	1200	12/24	2

Remote Load Centers (required if transformers are supplied by others)

RLC-1 BGI Remote Load Center-1 Circuit Breaker, 25A RLC-2 BGI Remote Load Center - 2 Circuit Breaker, 25A









Radiant Low Voltage Power Supplies are U.L. Listed and designed with 25 Amp overcurrent protection per circuit to be in compliance with N.E.C. 411. Radiant Low Voltage Lighting Systems can be supplied with QTran™ power supplies as specified. Other power supply configurations can be designed to meet your specific requirements. Please consult factory.

MAXIMUM FEET PER TRANSFORMER

			10 Watt	5 Watt	3 Watt		
Item	Description	Watts per Xfmr	Max. Feet per Xfmr	Max. Feet per Xfmr	Max. Feet per Xfmr		
			55.0 w/ft	27.5 w/ft	16.5 w/ft		
12 volt magnetic	12 volt magnetic power supplies						
RPM300-12 RPM600-12	Belfer Group Magnetic 300W 12V - 1 C.B. Belfer Group Magnetic 600W 12V - 2 C.B.	300 600	5 10	10 21	18 36		
24 volt magnetic power supplies							
RPM600-24 RPM1200-24	Belfer Group Magnetic 600W 24V - 1 C.B. Belfer Group Magnetic 1200W 24V - 2 C.B.	600 1200	10 21	21 43	36 72		
12 volt electronic p	oower supplies						
RPE75-12 RPE150-12 RPE300-12	Belfer Group Electronic 75W 12V Belfer Group Electronic 150W 12V Belfer Group Electronic 300W 12V	75 150 300	1 2 5	2 5 10	4 9 18		
24 volt electronic	power supplies						
RPE75-24 RPE150-24 RPE300-24	Belfer Group Electronic 75W 24V Belfer Group Electronic 150W 24V Belfer Group Electronic 300W 24V	75 150 300	1 2 5	2 5 10	4 9 18		
12/24 volt QTran™	magnetic power supplies (with circuit b	reaker & choke)					
QX150-1/15-CK-S QX300-1/25-CK-S QX450-1/25-CK-L QX450-2/25-CK-L QX600-1/25-CK-L QX600-2/25-CK-L QX750-1 CT-CK-L QX750-2 CT-CK-L	QTRAN Magnetic 150W 12/24V - 1 C.B. QTRAN Magnetic 300W 12/24V - 1 C.B. QTRAN Magnetic 450W 12/24V - 1 C.B. QTRAN Magnetic 450W 12/24V - 2 C.B. QTRAN Magnetic 600W 12/24V - 1 C.B. QTRAN Magnetic 600W 12/24V - 2 C.B. QTRAN Magnetic 750W 12/24V - 1 C.B. QTRAN Magnetic 750W 12/24V - 2 C.B.	150 300 450 450 600 600 750	9 18 27 27 36 36 45	5 10 16 16 21 21 27 27	2 5 8 8 10 10 13		
QZ1200-2 CT-CK-L	QTRAN Magnetic 1200W 12/24V - 2 C.B.	1200	72	43	21		

POWER SUPPLIES

TRANSFORMERS PER STRIP

Feet/ Strip	Lamps/ Strip	Watts/ Strip	Magnetic Transformer	Electronic Transformer	Q Tran Transformer			
10 watt lamps	10 watt lamps							
2' 4' 5' 6' 8' 10'	11 22 27 33 44 55	110 220 270 330 440 550	300W 300W 300W 600W 600W	150W 300W 300W n/a n/a n/a	150W 300W 300W 450W 450W 600W			
5 watt lamps								
2' 4' 5' 6' 8' 10'	11 22 27 33 44 55	55 110 135 165 220 275	300W 300W 300W 300W 300W 300W	75W 150W 150W 300W 300W 300W	150W 150W 150W 300W 300W 300W			
3 watt lamps								
2' 4' 5' 6' 8' 10'	11 22 27 33 44 55	33 66 81 99 132 165	300W 300W 300W 300W 300W 300W	75W 75W 150W 150W 150W 300W	150W 150W 150W 150W 150W 300W			

HOW TO CUT TO LENGTH TO FIT EXACT JOB REQUIREMENTS

THERE ARE TWO TYPES OF FIELD MODIFICATIONS:

1. DEAD END OR SINGLE CIRCUIT TERMINATION

The most common modification - end of run conditions where no additional strips are required

You will need:

- Measuring tape
- Hacksaw or wire cutters
- RAD 401 Dead End Termination
- 1. Remove excess lamps
- 2. Cut fixture with wire cutters or hacksaw flush to desired length, less 1/4"
- 3. Attach RAD 401 Dead End Termination to end of fixture



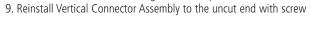
RAD 401 DEAD END TERMINATION

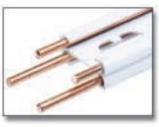
2. LIVE END OR TWO CIRCUIT CONNECTION

Where attaching an additional LV225 strip or where you need to access the second 25 Amp circuit

You will need:

- Measuring tape
- Hacksaw
- Wire Cutters
- Drill with 1/8" drill bit
- #2 Phillips head screwdriver
- 1. Remove lamps and lampholders at each end of the strip and at the cut
- 2. Unscrew and remove Vertical Connector Assemblies from both ends of the strip
- 3. Pull wire sets 4" out from uncut end
- 4. Cut fixture with hacksaw flush to desired length
- 5. Using Vertical Connector Assembly as a template, mark the cut end of the strip for connector mounting screw and drill 1/8" hole on the mark
- 6. Install Vertical Connector Assembly to cut end
- 7. Push wire sets completely into cut end, seating fully into the Vertical Connector Assembly (wire sets will become visible through the slots in the Vertical Connector Assembly)
- 8. At uncut end, trim wires to length -1/2" top, 1" bottom





WIRE SETS



INTEGRATED CONNECTOR ASSEMBLY

HOW TO DETERMINE THE NUMBER OF 25 AMP CIRCUITS

CIRCUIT CALCULATOR

THE RADIANT CHECKSUM SYSTEM (shown on page 6-7) can also be utilized using our Circuit Calculator Chart.

To use, round the linear footage (or meters) up to the closest mark in the chart, select the lamp wattage specified and follow the columns to determine the number of 25 Amp circuits.

CALCULAT	OR
24 VOLT SYSTEM	NUMBER OF 25 AMP CIRCUITS LINEAR FEET CHECKSUM = 100
LENGTH 10 Watt 5 watt 3 Watt	5' 10' 15' 20' 25' 30' 35' 40' 45' 50' 55' 60' 65' 70' 75' 80' 85' 90' 95' 100' 1 1 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 10 1 1 1 1 1 2 2 2 2 3 3 3 4 4 4 4 4 5 5 5 5 1 1 1 1 1 1 1 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3
12 VOLT SYSTEM	NUMBER OF 25 AMP CIRCUITS LINEAR FEET CHECKSUM = 50
LENGTH 10 Watt 5 watt	5' 10' 15' 20' 25' 30' 35' 40' 45' 50' 55' 60' 65' 70' 75' 80' 85' 90' 95' 100' 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 1 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 10
24 VOLT SYSTEM	NUMBER OF 25 AMP CIRCUITS LINEAR METERS CHECKSUM = 30
LENGTH 10 Watt 5 watt 3 Watt	5m 10m 15m 20m 25m 30m 35m 40m 45m 50m 55m 60m 65m 70m 75m 80m 85m 90m 95m100m 1 1 1 1 2 2 2 2 3 3 3 3 4 4 4 5 5 5 5 6 6 6 7 7 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2
12 VOLT SYSTEM	NUMBER OF 25 AMP CIRCUITS LINEAR METERS CHECKSUM = 15 5m 10m 15m 20m 25m 30m 35m 40m 45m 50m 55m 60m 65m 70m 75m 80m 85m 90m 95m100m

RAD LV 225 ACTUAL LENGTHS

4 6 6 8

2

10 Watt

5 watt

FIXTURE	NOMINAL LENGTH	ACTUAL LENGTH
RAD LV225 F/L 02	2ft fixture	27.1" (690mm)
RAD LV225 F/L 04	4ft fixture	48.7" (1240mm)
RAD LV225 F/L 05	5ft fixture	61.7" (1570mm)
RAD LV225 F/L 06	6ft fixture	74.7" (1900mm)
RAD LV225 F/L 08	8ft fixture	96.4" (2450mm)
RAD LV225 F/L 10	10ft fixture	122.4" (3110mm)

8

10 10 12 12 14 14 16 16 18 18 20

